

**Faculty of Science and Health
SCHOOL OF PHYSICAL SCIENCES
Postdoctoral Researcher
Surface Science
Level 1
(Contract for 30 months)**



As part of this role the researcher will be required to participate in the DCU Research Career Framework. This framework is designed to provide significant professional development opportunities to Researchers and offer the best opportunities in terms of a wider career path.

Background & Role

Applications are invited for a Science Foundation Ireland funded post-doctoral position in the Surface and Interface Research Laboratory at Dublin City University which will commence in September 2014. The project will address the fabrication and characterisation of ultrathin self-forming diffusion barrier layers between copper interconnects and insulating dielectric materials which is a key challenge for future semiconductor device generations. The project will use a range of advanced characterisation techniques to investigate the critical aspects of barrier formation on both SiO₂ and prototype porous low-k dielectric insulators.

Principle Duties and Responsibilities

Reporting to his/her Principal Investigator the Postdoctoral Researcher will:

- Conduct a specified programme of research under the supervision and direction of the Principal Investigator
- Assist in identifying and developing future research and funding initiatives
- Engage in the dissemination of the results of the research in which he/she is engaged with the support of and under the supervision of the Principal Investigator
- Supervise and assist postgraduate students working in this area with their research
- Engage in appropriate training and development opportunities as required by the Principal Investigator, the School or Research Centre, or the University.
- Liaise with both internal and external stakeholders including industry and academic partners/collaborators
- Carry out administrative work associated with the programme of research as necessary

Minimum Criteria

Candidates must possess a PhD, ideally in applied surface or material science, have proven experience in a range of surface characterisation techniques (e.g. XPS, SIMS, AES, AFM, etc.) and be familiar with high vacuum and ultra-high vacuum thin film deposition technology. Evidence of industrial engagement and of both written and oral presentation skills, as well as authored journal and conference publications, will be important criteria in the evaluation of the applicants.

Candidates will be assessed on the following competencies:

Discipline knowledge and Research skills – Demonstrates knowledge of a research discipline and the ability to conduct a specific programme of research within that discipline.

Understanding the Research Environment – Demonstrates an awareness of the research environment (for example funding bodies) and the ability to contribute to grant applications

Communicating Research – Demonstrates the ability to communicate their research with their peers and the wider research community (for example presenting at conferences and publishing research in relevant journals) and the potential to teach and tutor students

Managing & Leadership skills - Demonstrates the potential to manage a research project including the supervision of undergraduate students.

Salary: €37,750 to €40,003 depending on experience and qualifications (Funding awarded post April 2010)

Closing date: 1st August 2014

Proposed starting date: 1st September 2014

Informal enquiries to: Prof Greg Hughes, DCU, Dublin 9
E-mail: greg.hughes@dcu.ie Phone: +353 (0)1 700 5390

Application Procedure:

Application forms are available from the DCU Current Vacancies (open Competitions) website at <http://www.dcu.ie/vacancies/current.shtml> and also from the Human Resources Department, Dublin City University, Dublin 9. Tel:+353 (0) 1 7005149.

Applications should be submitted by email to hr.applications@dcu.ie or by Fax: +353 (0)1 7005500 or by post to the Human Resources Department, Dublin City University, Dublin 9. Human Resources Department, Dublin City University, Dublin 9. Tel: +353 1 700 5149; Fax: +353 1 700 5500 Email: hr.applications@dcu.ie

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